CLAIMS

What is claimed is:

2. A method of time charging to DHCP online users in a broadband access server, comprising the steps of:

a) setting an inner time, an outer time and a flow threshold for counting data flow of the users in the broadband access server, the inner time being shorter than the outer time;

b) starting time charging to the users by instruction of the access server to the users sooner after the users access the access server and are authenticated successfully,

c) establishing a circular link list to each user for recording data flow of the user in the access server;

d) defining a number of elements in the circular link list as a multiple of the outer time to the inner time in the access server; and

e) detecting the data flow of the user according to the inner time in the access server, and recording the data flow as a content of a head pointer of the circular link list in turn, until data flow newly detected and the content rerecorded in the head pointer are not more than the flow threshold.

3. The method of claim 1, characterized in that, when the circular link list is not full, step e) further comprises the step of:

e1) examining data flow newly detected and the content of the head pointer, when exceeds the flow threshold, saving the data flow newly detected as the content of the head pointer, and, meanwhile, moving the head and tail pointers down a position.

3. The method as claimed in claim 1, characterized in that, when the circular link list is full, step e) further comprises the step of:

e2) examining data flow newly detected and the content of the head pointer

element, when exceeds the flow threshold, saving the data flow newly detected as the content of the head pointer, and moving the head and tail pointers down a position.

4. The method of claim 2 or 3, characterized in that the method further comprises the steps of:

f) deciding the user in an IDLE state in the access server when the data flow newly detected and the content recorded in the head pointer does not exceed the flow threshold; and

g) stopping time charging to the user by instruction of the access server to the user.

5. The method of claim 4, characterized in that the method further comprises the step of setting the user in an unauthenticated state in step f).

6. The method of claim 4 or 5, characterized in that the method further comprises the step of setting a charging server for time charging to the online users in step b).

7. The method of claim 6, characterized in that the time for the charging server to stop time charging is before an outer time corresponding to the inner time when the IDLE state is detected.

8. The method of claim 5, characterized in that the inner time is about 30 seconds and/or the outer time is about 5 minutes.

9. A method of time charging to DHCP online users in a broadband access server, characterized in that the method comprises the steps of:

detecting data flow of an authenticated user by using an inner time interval being shorter than an outer time interval and a flow threshold in the broadband access server and establishing a circular link list corresponding the user so as to decide whether the user is in an IDLE state; and

if the user is not in the IDLE state, recording current data flow in the circular

link list and continually detecting the data flow; otherwise, determining the user in IDLE state.

10. The method of claim 9, characterized in that the method further comprises the steps of:

assigning an IP address through the broadband access server to a user and authenticating the user;

starting time charging to the user from the time when the user is authenticated successfully;

calculating a number of elements in a circular link list according to the inner time and the outer time configured;

updating the information of the user flow timely;

detecting an IDLE state of the user; and

forcing the user in IDLE state to log out.